

Notice of Allowability

Application No.

10/705,906

Examiner

Robert J. Hoffberg

Applicant(s)

NICHOLS, RANDOLPH G.

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/30/06.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


LYNN FEILD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Detailed Action

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. The application has been amended specification paragraphs [0017], line 7 as follows:

"215can" has been changed to --215 can--

(The change is to correct a typographical error and does not affect the teachings of the specification).

Response to Arguments

3. Revised drawing (Fig. 2A and 2B) is acceptable.

4. Applicant's arguments with respect to claims 1-12 are directed to the amended claims that have been amended to overcome the prior art.

Allowable Subject Matter

Claims 1-12 are allowed.

The following is an examiner's statement of reasons for allowance: The allowability resides in the overall structure of the apparatus as recited in independent claims 1, 7 or 11, and at least in part, because claims 1, 7 and 11 recite a circuit card assembly including "a printed wiring board with electrical components", "a shell", "a spacer", "a connector", "a thermal filler" thermally connecting an electronic component

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to the shell and "a lightweight material" to the fill void between the printed wiring board and the shell that is not filled by the thermal filler.

The aforementioned limitations in combination with all remaining limitations of the respective claims are believed to render said independent claims 1, 7 and 11 and all claims dependent therefrom patentable over art of record.

The closest references to the present invention are believed to be as follows:

Artus (US 4,764,845) teaches a circuit card assembly with a printed wiring board with electronic components, a shell, a spacer and a connector with a thermal filler and a second filler material but lacks the thermal filler thermally connecting the electronic component to the shell. Sherif et al. (US 5,604,978) teaches a printed wiring board with electronic components and multiple thermal fillers but fails to teach a lightweight filler to fill remaining void in the shell. Carpenter (US 5,541,448) teaches a printed wiring board with electronic components a shell, a connector but teaches that a filler has the dual purpose of being a thermal filler and the lightweight material. Schenk (US 5,009,311) and Grenet et al. teach a printed wiring board with electronic components, a shell and a lightweight filler but fails to disclose the thermal filler. Bootle et al. (US 5,717,160) teaches the shell comprising of planar sheets of composite material but lacks any of the remaining claimed structure.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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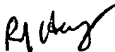
None of the cited references, either taken alone or in combination is believed to render the present invention unpatentable as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Hoffberg whose telephone number is (571) 272-2761. The examiner can normally be reached on 8:30 AM - 4:30 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJH 


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